AN ANALYSIS OF FAMILY NURSE PRACTITIONER-PHYSICIAN CONSULTATIONS

by

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PATRICIA MERWIN. An Analysis of Family Nurse Practitioner-Physician Consultations (Under the direction of DR. CAROLYN WILLIAMS.)

An observation study was conducted for the purpose of analyzing the family nurse practitioner-physician consultation activities.

A consultation rate of 23 percent was found in the 337 family nurse practitioner patient encounters that occurred during the three week study period. This was a consultation rate of 49.7 percent when a physician was present in the clinic compared to a consultation rate of 13.9 percent when the physician was absent. The largest percent of consultation occurred in encounters where the age of the patient was in the 0-4 and 25-44 groups. The most frequent reasons for consultations were physical findings 52.8 percent, symptoms 48.7 percent and treatments 44.9 percent. The congruence between the family nurse practitioners request for consultation and the physicians response was 83.3 percent.

ACKNOWLEDGEMENTS

The investigator would like to express her gratitude and appreciation to her committee members. Particular thanks to Dr. Carolyn Williams for serving as chairman and for her assistance with data analysis; to Dr. Glenn Pickard who suggested the area to be studied initially; and to Julia Watkins who agreed to serve as a committee member after one of the original committee members could no longer serve.

The investigator would also like to thank the clinic staff, especially the family nurse practitioners who were so helpful in the data collection process.

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CHAPTER I

INTRODUCTION TO THE STUDY

Current methods of delivering health care are undergoing careful scrutiny not only by members of the health professions but also by the consuming public. Both of these sources agree that there is a need for change. In response to this challenge the nursing profession has called upon its members to extend and expand the role of nursing to more adequately meet the health care needs of society.

The extended role is not one role but several and it is referred to by a variety of names. Two of the names commonly used are family nurse practitioner and pediatric nurse practitioner.

This chapter will focus on the need for change in the delivery of health care and how this change will affect nursing, particularly the extended role of the nurse. Questions will be asked about this new role, the literature will be searched for answers and the purpose of this study will be explained.

Changes in Health Care

There are many reasons why change is needed in the health care delivery system. Traditional methods of delivering health care have not been able to keep up with the increased demand for services brought about in part by a better informed public.[1] Along with an increased demand for service there have been shortages and maldistribution of health care professionals needed to provide these services.[2] The increase of knowledge in biomedical science has further complicated the organization and delivery of health care services.[3]

In addition to increased demand for health care services the public has been concerned with the kind of service provided by health care professionals. Health care is the responsibility of all health care professionals and it "...comprises more than diagnosis, treatment and rehabilitation associated with acute and chronic illness; it includes health education, health maintenance, prevention and early case finding.[4] A health care delivery

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[1] S. R. Garfield, "The Delivery of Medical Care," Scientific American 222 (April, 1970).

[2] H. Brunetto and P. Birk, "The Primary Care Nurse--The Generalist in a Structured Health Care Team," American Journal of Public Health 62 (June, 1972):785.

[3] Secretary's Committee to Study Extended Roles for Nurses, Extending the Scope of Nursing Practice (Washington: U.S. Government Printing Office, 1971), pp. 2-3.

[4] Ibid., p. 3.

system should have public input in the design and operation of the system.[5]

Because the need for primary health care is greater than can be provided by physicians alone,[6] because by increasing the size of existing health care facilities the problem of maldistribution of services is not solved and because the public is not satisfied with the kind of health services provided, there is need for change in the health care delivery system.

Extending the Scope of Nursing Practice

It has been suggested that utilization of the nurse in an extended role might be a way of improving delivery of health care services.[7] By utilizing skill and knowledge already in their background and with limited additional training, nurses can assume responsibilities that have been exclusively within the realm of the physician.[8] One of the areas where a nurse with such training could be used to improve the delivery of health care service is in the area of primary care. According to one source "primary care of adequate scope and economy could be provided

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[5]Ibid.

[6]Brunetto, op. cit., p. 15.

[7]Secretary's Committee to Study Extended Roles for Nurses, op. cit., p. 4.

[8]Brunetto, op. cit., p. 791

nationally with existing numbers of physicians and attainable numbers of nurses."[9]

Primary care is "a person's first contact in any given episode of illness with the health care system that leads to a decision of what must be done to help resolve his problem."[10] It includes "the responsibility for the continuum of care, i.e., maintenance of health, evaluation and management of symptoms and appropriate referrals."[11]

Before nurses began being utilized in the extended role, physicians were the primary providers of primary medical care. Since the development of the extended role, it has been demonstrated that nurses with additional training and proper physician backup can provide primary care in selected patients.[12]

Utilizing nurses in the extended role to provide primary care should positively affect the delivery of health care service. First, it should increase the numbers of health care professionals providing primary care. Second, it should promote better utilization of health care professionals by affording the physician more time to

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[9] Ibid.

[10] Secretary's Committee to Study Extended Roles, op. cit., p. 8.

[11] Ibid.

[12] R. F. H. Kirk, et al, "The Family Nurse Practitioner in Eastern Kentucky," Medical Care 9 (March-April 1971):160-168.

devote to the management of complex problems and by having the nurse focus on health promotion, maintenance and education areas in which she has not been fully utilized in the past. Third, by utilizing the skills of the nurse for primary care with the physician providing backup for complex problems, the care of the patient should be less fragmented. The patient will be receiving health care from one source with appropriate referral to other sources when necessary.

Because utilization of the nurse in the expanded role is relatively new there are little data on first whether she is able to provide primary care and second, if she is able to provide primary care does she work efficiently with the physician in providing this care.

Some determination of how efficiently the nurse and physician function might be made by looking at how often and for what reasons they consult. A nurse in this role is using guidelines or protocols developed with the physician to help her make decisions. The degree to which she is able to use the protocol and make appropriate decisions without consulting the physician determines to some extent how efficient the physician nurse team is in providing primary care.

If a nurse's training has prepared her to manage a problem without consulting a physician, and if in this situation she does consult a physician, the consultation may not be appropriate and the time of both the nurse and

physician is not being utilized efficiently. An exception to this might be if the patient has multiple problems. Even though the nurse has been taught to manage individual problems, when they occur together she may find it necessary to consult with a physician. A consultation under these circumstances would be considered appropriate. If the nurse's training has not prepared her to manage a problem, then consultation with a physician is appropriate and is good utilization of the time of both the nurse and the physician.

If the protocols established by the physician and nurse identify a situation in which consultation is appropriate and the nurse does not consult with the physician, her intervention may be inappropriate and ineffective or unsafe. If on the other hand the nurse does consult with the physician in a situation identified in the protocol as requiring consultation, the consultation is appropriate and there is efficient utilization of both the physician and the nurse.

Although knowing if a consultation is appropriate would be a better indicator of efficiency, knowing how often consultation occurs does get at efficiency to a limited degree. A high consultation rate may indicate that the physician nurse team are not making the best use of their time. A high consultation rate may also be an indication of a need for further training.

Information about the circumstances surrounding the consultation; for example when does consultation occur and by what method does it occur, may tell something about how efficiently the physician nurse team is functioning. If a large number of consultations occur when the physician is not present in the health care center it may indicate the need to reschedule the time that he is available to the nurse in the health care center. If on the other hand few consultations occur when the physician is available in the health care center it may not be necessary to have him spend as much time there.

Appropriateness of a consultation might be determined to some extent if the reason a nurse asked for a consultation could be compared with what the physician did in response to the request for consultation. If the nurse asked the physician to do one thing and he did something else in response to her request one might question how appropriate the request was. Looking at reasons for consultations might also provide information on areas where nurses might need further training and possibly areas where protocols do not provide the necessary guidelines.

Looking at the diagnostic categories or presenting problems of patients that require consultations would provide information on the kind of problem that nurses can manage using guidelines and the kind of problem that requires consultation. This would serve two purposes.

First, it would help identify the kind of diagnosis and problems that nurses can best manage in a primary care setting. Second, it would identify problems with which nurses need physician assistance and possibly problems that should be managed by physicians. A high consultation rate in a specific diagnostic category might also indicate the need for additional training in that area.

The use of the nurse in the extended role to provide primary care is being demonstrated in a variety of settings. The investigator is interested in knowing to what extent the nurse in the extended role is able to function with the guidelines developed and how often and under what circumstances she must consult with a physician. To see if these questions had been raised by others and if adequate answers had been found, a review of the literature was conducted.

Literature Review

There have been many articles in the professional literature in the past ten years on the role of the family nurse practitioner or similar expanded roles. Nursing Outlook, in January 1972, 1974 and 1975 devoted whole issues to exploring the expanded role of the nurse[13,14,15]

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[13] Nursing Outlook 20 (January, 1972).

[14] Nursing Outlook 22 (February, 1974).

[15] Nursing Outlook 23 (March, 1975).

and E. L. Brown has written two volumes on this subject.[16] There have also been several books containing collections of articles on this same subject.[17,18] Most of these sources describe the role in rather general terms, therefore many of the specific questions that the reader has may be unanswered.

In contrast to the general professional literature on the expanded role, the research literature contains few articles specifically on family nurse practitioner-physician consultation or classification of presenting problems of patients seen by the family nurse practitioner.

The Lewis and Resnik study was one of the first to report the utilization of nurses in the expanded role.[19] This study used the critical incident technique to describe the activities of nurses in nurse clinics with a select group of chronically ill patients. In addition to describing activities, an analysis was made of the decision making problems encountered by the nurses and whether or not a

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[16] E. L. Brown, Nursing Reconsidered A Study of Change, Part 2, The Professional Role in Community Nursing (Philadelphia: J. B. Lippincott Company, 1971).

[17] E. P. Lewis (ed.), Changing Pattern of Nursing Practice, New Needs, New Roles (New York: The American Journal of Nursing Company, 1971).

[18] M. V. Dryden, Nursing Trends (Dubuque, Iowa: Wm. C. Brown Company Publishers, 1968).

[19] C. E. Lewis and B. A. Resnik, "Activities, Events and Outcomes in Ambulatory Patient Care," New England Journal of Medicine 280 (March 20, 1969):645-649.

physician was consulted when a problem occurred. Some of the circumstances surrounding the consultation were described along with the kind of symptoms that caused the decision making problems.[20]

Lewis and Resnik found that during a period of nine months when the study was conducted, 53 patients made 363 visits to the nurse clinics. Of the 363 visits, in 201 or 55 percent decision making problems occurred that required the nurse to consult with the physician, 56 percent of the consultations were in person, 39 percent were by telephone and 5 percent in writing. Seventy-seven percent of the time consultations took place during the clinic visits, 14 percent of the time after and 9 percent of the time before. Lewis and Resnik concluded that the nurses in the clinics "were engaged primarily in supportive role functions, rather than the technical, diagnostic and therapeutic activities of internists."[21]

This study is significant because it looks at the consultation rate in a clinic setting using a nurse in an expanded role. It also looks at the symptoms of patients presenting decision making problems for the nurse that require her to consult with a physician.

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[20] Ibid., p. 647.

[21] Ibid., p. 648.

The Frontier Nursing Service in Kentucky was the setting for two studies which described the activities of nurses functioning in expanded roles. Benjamin's study described the activities of nurses providing primary medical care in clinics and home visits to a rural population in Kentucky.[22] The nurses in this sutdy were utilized to do histories, physicals, make diagnoses and to treat patients using standing orders from physicians. In 1036 encounters, where patients were seen by nurses, 70 percent were seen in the clinics and 30 percent were seen at home. Ninety-six percent of all patients were handled by the nurse alone and 4 percent required physician consultation. The study also shows the frequency of disease diagnosis by major groups for all patient visits but not for visits requiring consultation. Benjamin concluded that the nurses in this study were an independent source of primary health care.[23]

Kirk's study documents the activities and functions of a group of family nurse practitioners in a rural eastern Kentucky.[24] The nurses are guided by standing orders and conditions which nurses cannot treat and must be referred to a physician are outlined. The nurses were observed in

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[22]R. A. Benjamin, "Analysis of Health Care Delivery by the Frontier Nursing Service" (Unpublished paper, October 1969).

[23]Ibid.

[24]RFH Kirk et al, "The Family Nurse Practitioner in Eastern Kentucky," Medical Care 9 (March-April 1971): 160-168.

hospital clinics and outpost settings. In 12,177 nurse patient encounters in outpost clinics, the percent of patients that the nurse saw, which required physician consultation, was 24.6 percent. In 11,562 nurse patient encounters in hospital clinics, the nurse physician consultation rate was 70 percent.[25] The study also classified patient visits according to complaints by system but it did not indicate the complaints of patients requiring consultation. Kirk concluded that the family nurse practitioners with the Frontier Nursing Service do provide primary care for a majority of patients they see and they can see a large portion of patients without consulting a physician.

Schulman and Wood described the experiences of one nurse practitioner who had completed a one year training program.[26] The study encompasses a six month experience of a nurse practitioner taking care of chronically ill patients in a medical clinic. Unlike some previous studies, there were no routine standing orders and no special diagnosis were selected. In 338 nurse patient encounters, the nurse had to consult with the physician 25 percent of the time.[27] The study indicated the

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[25] Ibid.

[26] J. Schulman, Jr. and C. Wood, "Experience of a Nurse Practitioner in a General Medical Clinic," Journal of the American Medical Association, vol. 219, no. 11 (March 13, 1972), pp. 1453-1461.

[27] Ibid., p, 1459.

frequency of diagnoses for the visits but did not indicate the diagnoses of patients who required consultation. Schulman and Wood concluded that nurses, with the kind of training indicated, and with minimal supervision, could take care of patients and that the primary ability of the nurse practitioner "...lies in the realm of judgment and decision making...".[28]

Spitzer's study describes a randomized controlled trial to assess the effect of substituting a nurse practitioner for a physician in a primary care practice. The two nurses involved in this study completed a program to increase their decision making and clinical judgment skills. Data was obtained on 21,085 encounters over a period of one year. The study looked at the consultation rate which was 33 percent in the final weeks of the trial. Quality of care was assessed by management of certain indicated conditions and the results demonstrated that the nurse practitioner could provide first contact primary care as safely and effectively as the physician.[29]

None of the three preceding studies include reasons for consultation or the circumstances in which consultations occur. None of them deal with the competence of the nurse although Spitzer did assess quality of care. Although

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[28] Ibid., p. 1461.

[29] W. O. Spitzer, et al, "The Burlington Randomized Trial of the Nurse Practitioner," New England Journal of Medicine, vol. 290, no. 5 (January 31, 1974), pp. 251-256.

some of them did classify presenting problems none of their reported consultation rates related to specific problems. Because adequate answers could not be found for the questions raised, a study was proposed to answer some of the questions.

The Study

The investigator would have liked to have looked at consultation rates related to specific patient problems, but the length of the study proposed would not have generated sufficient data to provide significant findings.

The purpose of this study is: (1) to describe a method with which to examine family nurse practitioner-physician consultations (2) to examine family nurse practitioner-physician consultations (3) to describe a method of classifying presenting problems of patients seen by family nurse practitioners.

CHAPTER II

DATA COLLECTION

The study is designed to determine the frequency of family nurse practitioner-physician consultations and to describe the reasons for and the circumstances surrounding the consultations.

The Setting and Subjects

The setting selected is one of the health care centers of the Orange-Chatham Comprehensive Health Services, Inc. or OCCHS, Inc. OCCHS, Inc. was a newly organized health care delivery system at the time the study was done and was developed to meet the health care needs of a community that had been without an adequate health care system. The community served by OCCHS, Inc. is a two county rural community surrounding a university medical center which had been the only source of health care for many people in the community before the organization of OCCHS, Inc.

OCCHS, Inc. consists of three satellite clinics located in the community, served and staffed by family nurse practitioners and physicians from the university medical center with the family nurse practitioner as the

providers of primary care. One of the purposes of OCCHS, Inc. is to demonstrate a new health care delivery system that utilizes the family nurse practitioner.

Three family nurse practitioners assigned to the clinic were the subjects of this investigation. These three family nurse practitioners received their training at the same time in the Family Nurse Practitioner Training Program at the University of North Carolina at Chapel Hill. The program consisted of six month's training and six month's supervised experience. Two of the family nurse practitioners had worked at the clinic since it opened, a period of nine months. The third family nurse practitioner began working at the clinic three months after it opened. She had worked at another OCCHS, Inc. clinic before and had a total of eight month's experience as a family nurse practitioner.

The clinic staff consisted of three physicians, one internist, one pediatrician and one obstetrician gynecologist who had been on the clinic staff since it opened, a period of nine months. All of the clinic staff were familiar with the role of the family nurse practitioner as they had all been involved in the training of the family nurse practitioners. The physicians from the clinic staff, along with physicians from the other OCCHS, Inc. clinics rotated the responsibility for backing up the family nurse practitioners when they were on call.

The clinic was open from 9 a.m. to 5:00 p.m. Monday through Friday. The family nurse practitioners were in the clinic from about 8:30 a.m. to 5 p.m. or until the last patient was seen. Each family nurse practitioner had patients that she saw by appointment and each rotated the responsibility for seeing patients that walked into the clinic without appointments.

Physicians were scheduled to be in the clinic for one-half day at a time. The internist was scheduled for three afternoons a week, the pediatrician was scheduled for one morning and two afternoons a week and the obstetrician gynecologist was scheduled for one afternoon a week. The pediatrician and obstetrician were scheduled for the same afternoon so that a physician was present in the clinic except for four mornings a week. If there were no physicians present in the clinic during the time the clinic was open, physicians could be reached by phone.

The family nurse practitioners worked with protocols developed jointly with physicians. These protocols indicated which patients were to be seen by the physician after the initial family nurse practitioner contact and which ones required physician consultation. The protocols also indicated which patients were to be referred to health care sources outside the clinic.

The Sample

The sample selected for study consisted of three hundred thirty-seven family nurse practitioner-patient encounters that occurred during a three week period. An encounter is defined as a contact between a family nurse practitioner and a patient, for the purpose of providing health care. It can occur in person, or by phone when the family nurse practitioner is in the clinic or on call.

Two methods were used to select samples, those observed by investigators called observed encounters and those reported by the family nurse practitioner called FNP reported encounters. (See Table 1, Chapter 3.) The method for selecting time periods in which to observe encounters was designed for collecting data for a different but related study. The two observers collaborated in their data collection efforts and therefore had to use the same time periods to observe encounters. For a full description of the procedure used for selection of observation time periods, see Appendix I.

The sample of family nurse practitioner reported encounters consisted of all family nurse practitioner-patient encounters that occurred during the three week period that the study was conducted excluding the time periods when the observers were present. This group of encounters was included in the sample because it was

determined that an insufficient number of consultations would be available from the observed encounters and time restraints did not permit extending the data collection period.

In accord with the School of Nursing's Committee on Human Research the subjects were informed of their role in the study. They were told that they would be observed and it would be their role to explain the presence of the observer to the patient. The patients were not the subjects of the study but if they objected to the presence of the observer during an encounter, that encounter would not be observed. During the course of the study no patient refused to have an encounter observed. Written consent was obtained from the subjects and submitted to the Committee on Human Research.

Observation Record

The Observation Record (see Appendix III) was developed by the investigators with input from the clinic staff for the purpose of recording observations during the data collection period. Two observers collecting data for different but related studies collaborated on data collection. Therefore some parts of the Observation Record (Part IV & V) relate more specifically to the other investigator's study.[1] The Observation Record will be

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[1]C. Freund, "A Description of Family Nurse Practitioners' Activities" (Master's Thesis, School of Nursing, University of North Carolina).

fully discussed in Appendix IV and only a general description will be given here. Part I, Face Sheet was used for recording identifying information. Part II was used to record the presenting problems of each patient seen, and Part III was used to record information about the family nurse practitioner physician consultation. Parts IV & V were used to record the activities and the time spent in these activities by the family nurse practitioner. Parts I, II and III relate specifically to this investigator's study.

The Observation Record was pretested two weeks before the data collection period. At this time the family nurse practitioners were asked for any comments or suggestions they had for improving the record. No changes in Parts I, II or III of the record were made as a result of their input.

Data Collection

Observed Encounters

Parts I, II, IV & V of the Observation Record were completed by the observer[2] for each encounter observed. See Appendix III & IV for the Observation Record and directions for its use. Part III of the record was completed by the observer each time a FNP-physician consultation occurred during an observed encounter. The record was completed by the observer after talking with the family

[2]The observers were the investigators.

nurse practitioner and getting her interpretation of what had occurred during the consultation.

Reliability

On two occasions during the third week of the study the two observers jointly observed four encounters. There were no differences in how the observers recorded the encounters on Part I & II of the Observation Record. No consultations were jointly observed so Part III of the Observation Record was not utilized. Part IV & V are not relevant to this study. A report of the reliability between the two observers on Part IV & V of the Observation Record can be found in the other observer's study.[2]

An informal check on reliability was conducted by the observers throughout the study. Whenever there were questions as to how to categorize data, the data were not recorded until the observers discussed the questions and came to an agreement.

Family Nurse Practitioner Reported Encounters

Part I, II & III of the Observation Record was completed by the family nurse practitioner involved every time a consultation occurred during an encounter that was not being observed. The family nurse practitioner was instructed in how to complete the Observation Record a

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[3] Ibid.

few days before the start of the study. Observers reviewed the completed Observation Records with the family nurse practitioner that completed them daily to see that they were filled out correctly. This was done until the observers were sure that the family nurse practitioners understood how to use the record. The records were also reviewed daily to make sure they were completely filled out. If any data were missing the appropriate family nurse practitioner was contacted to complete the record.

Reliability

No formal reliability check was made of the family nurse practitioners' reported encounters. It was believed that the family nurse practitioners were as accurate as the observers in completing the Observation Record after reviewing it with them the first few days of the study. If there were any questions about how to categorize data the family nurse practitioner involved contacted an observer and a decision was made as to how to categorize the data.

CHAPTER III

DATA ANALYSIS

Introduction

Extending and expanding the scope of nursing practice has been identified as one way to more adequately meet the health care needs of society. Many agencies have developed models that demonstrate the expanded role of the nurse. One such agency is OCCHS where the role of the family nurse practitioner is being demonstrated. This chapter will describe the consultation activities of three family nurse practitioners involved in the OCCHS demonstration project and will evaluate the method used for classifying the presenting problems of patients in observed encounters and family nurse practitioner reported encounters.

In part I the consultation activities of the family nurse practitioners will be described in terms of frequency of occurrence and factors that appear to affect the frequency of occurrence. The consultation will be descirbed in terms of when it occurred and by what method it occurred. In part II the type of consultation and reason for consultation along with the physician's response to consultation will be described. Part III will evaluate the utility

of the method used for classifying presenting problems of patients seen by the family nurse practitioner.

If the delivery of health care is to be improved by utilizing the nurse in the extended role to provide primary care, she must demonstrate her ability to make decisions about health care of individuals using specific guidelines without excessive consultation with the physician. The efficiency of the family nurse practitioner physician team can to some extent be evaluated by looking at how often and for what reasons the family nurse practitioner consults with the physician.

Efficiency of the family nurse practitioner physician team might be improved by identifying the presenting problems of patients for which the nurse consults with the physician. Problems that require frequent consultation might indicate a need for more training of the family nurse practitioner to improve her knowledge in this area and decrease the need for consultation. Problems that require frequent consultation might also indicate situations that should be managed by physicians rather than family nurse practitioners to provide the most efficient delivery of health care.

Part I

During the three week period that the data were collected there were 337 family nurse practitioner-patient encounters. Of the 90 encounters observed by the

investigator 27 required consultation and 63 required no consultation. Of the remaining 247 family nurse practitioner-patient encounters, only the encounters requiring consultation were included in the study. These encounters were reported by the family nurse practitioner involved in the consultation. Of the 247 family nurse practitioner-patient encounters 51 required consultation and 196 required no consultation. (See Table 1 below and Table 2, page 26.)

TABLE 1

FLOW CHART OF FNP-PATIENT ENCOUNTERS DURING STUDY PERIOD

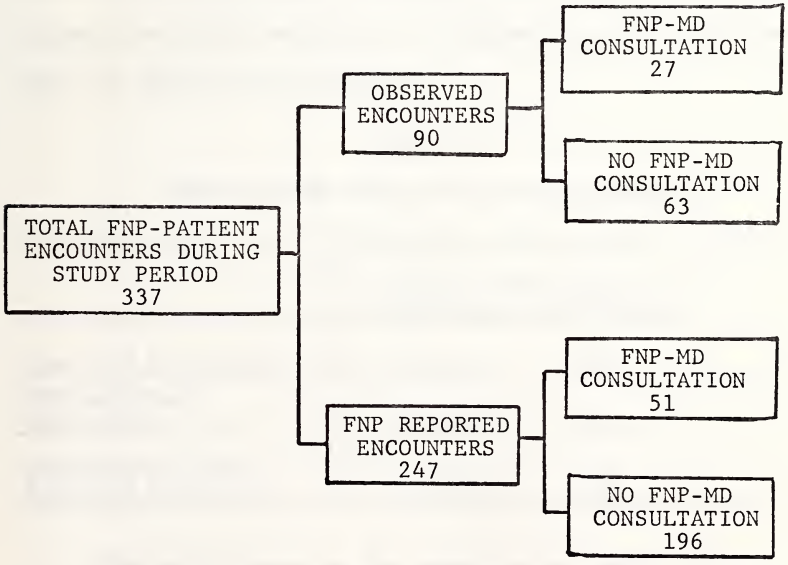

TABLE 2

ALL STUDY ENCOUNTERS BY CONSULTATION STATUS

	Observed Encounters	FNP-Reported Encounters	Total Encounters
FNP-MD Consultation	27	51	78
No FNP-MD Consultation	63	196	259
Total	90	247	337

As seen in Table 3 the consultation rate for observed encounters was 30 percent, the family nurse practitioner reported encounters 21 percent and the combined total 23 percent (see Table 3).

TABLE 3

CONSULTATION RATES BY TYPE OF ENCOUNTER

	Percent of Encounters Requiring Consultation	
Observed Encounters	27/90	30%
FNP Reported Encounters	51/247	21%
Observed and FNP Reported Encounters	78/337	23%

The difference in the consultation rates for observed encounters and family nurse practitioners reported

encounters may be explained by the fact that more family nurse practitioner reported encounters occurred when there were no physicians in the clinic, for example, when the family nurse practitioners were on call outside of regular clinic hours. As seen in Table 5, page 29, the consultation rate was higher when a physician was present in the clinic. The consultation rate was 40.7 percent when a physician was present in the clinic as compared to 13 percent when one was not present. Another explanation for the lower consultation rate for reported encounters might be that not all the consultations that occurred were reported.

It is interesting to note that the consultation of 23 percent is very similar to the consultation rate of 25 percent reported by Schulman for an almost identical number of encounters, 338. Schulman's study was also similar to this study in the kind of practitioner observed and the setting in which she functioned.[1] Lewis' study reported a higher consultation rate, 55 percent for about the same number of encounters, 363. There were some dissimilarities in the Lewis study that may account for the higher consultation rate. For example the nurses did not attend a formal training program and the patients they saw were limited to five diagnostic categories.[2]

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[1]Schulman, op. cit.

[2]Lewis, op. cit.

A consultation rate of 23 percent suggests that the family nurse practitioner is able to provide primary care without excessive consultations with physicians. The consultation rate appears to be consistent with other studies done in similar settings with similarly prepared practitioners. This suggests that the family nurse practitioner observed in this study are at least as efficient as some of the other family nurse practitioners models demonstrated.

As seen in Table 4, page 29, more consultations occurred when a physician was present in the clinic during an encounter than when he was not. Fifty-one or 65.4 percent of the consultations occurred when a physician was present and 27 or 34.6 percent occurred when he was not present. The consultation rate for observed encounters when a physician was present was 40.7 percent and the consultation rate, when the physician was not present, 13.9 percent (see Table 5, page 29). The increased rate of consultations, when a physician was present in the clinic, could be explained in part by the family nurse practitioner's practice of scheduling patients with problems which might require consultation, to be in the clinic when a physician would be present. The increased rate of consultations, when a physician was present, might also suggest that the family nurse practitioner utilized the physician more for consultation when he was present in the clinic.

TABLE 4

DISTRIBUTION OF CONSULTATIONS BY MD PRESENCE IN CLINIC

MD Present in Clinic During Encounter	Number	Percent
MD Present	51	65.4
MD Not Present	27	34.6
Total	78	100.0

*Based on all observed and reported encounters

TABLE 5

NUMBER AND PERCENT OF OBSERVED ENCOUNTERS AND CONSULTATION RATE BY PRESENCE OF MD IN CLINIC

MD Present in Clinic During Encounter	# and % of All Observed Encounters		Consultation Rate	
	#	%	#	%
MD Present	54	60	22	40.7%
MD Not Present	36	40	5	13.9%
Total	90	100	27	30.0%

There is little difference in the consultation rate of observed encounters according to appointment status (see Table 6, page 30). The consultation rate for walk-ins is 29.6 percent and the consultation rate for appointments is 30.2 percent.

TABLE 6

CONSULTATION RATE BY APPOINTMENT STATUS
FOR OBSERVED ENCOUNTERS

Type of Encounter	# of Observed Encounters	# of Consultations	Rate of Consultation
Walk-in	27	8	29.6%
Appointment	63	19	30.2%
Total	90	27	30.0%

As seen in Table 7, of the observed encounters, the highest percentage of the consultations were in the 0-4 age group. This might be explained by the fact that the family nurse practitioners were still in the process of developing their pediatric assessment skills. The next highest percentage of consultations were in the 25-44 age group. In an attempt to explain why the percentage of consultations in this age group was so high, the presenting problems of these patients were examined. Nothing of importance was found by doing this. The lowest percentage of consultations were in the 45-65 and 65 and over age groups. This might suggest that family nurse practitioners were knowlegeable about conditions that affect adults and geriatric patients--more specifically chronic illnesses.

TABLE 7

CONSULTATION RATE OF OBSERVED ENCOUNTERS BY AGE GROUP

Age Group	# in Age Group	# of Consultations	Consultation Rate
0 - 4	17	8	47.1%
5 - 14	8	3	37.5%
15 - 24	14	3	21.4%
25 - 44	19	8	42.1%
45 - 64	21	3	14.3%
65 & over	11	2	18.2%
Total	0	27	30.0%

Asseen in Table 8, page 32 the largest number of consultations, 48 or 61.5 percent, occurred during the encounters. A small number 2 or 2.6 percent occurred before the encounter and a rather large number 28 or 35.9 percent occurred after the encounter. The small number of consultations before the encounter suggests that in only a few instances was the family nurse able to anticipate the need for consultation and obtain the needed counsel before the encounter. The number of consultations that occurred after the encounter, 28 or 35.9 percent may be explained in two ways. First, it may indicate that the physician was unavailable during the encounter or it may indicate that the family nurse practitioner

needed to validate what she did during the encounter with the physician.

TABLE 8

PERCENT AND NUMBER OF ENCOUNTERS IN WHICH FNP-MD CONSULTATIONS OCCURRED BY TIME OF FNP-MD CONSULTATION

Time of FNP-MD Consultation	#	%
Before Encounter	2	2.6
During Encounter	48	61.5
After Encounter	28	35.9
Total	78*	100.0

*Includes observed and reported encounters.

As can be seen by Table 9, page 33, the method by which most consultations occurred was in person, 53 or 67.9 percent. Telephone consultations occurred 22 or 28.2 percent of the time and written consultations occurred 3 or 3.8 percent of the time. Of the written consultations, 2 were to physicians who were not on this clinic staff--but were on the staff of other OCCHS, Inc. clinics and were therefore considered internal consultations.

TABLE 9

PERCENT AND NUMBER OF ENCOUNTERS IN WHICH FNP-MD CONSULTATION OCCURRED BY METHOD OF FNP-MD CONSULTATION

Method of FNP-MD Consultation	#	%
In Person	53	67.9
Telephone	22	28.2
Written	3	3.8
Total	78*	100.0

*Includes observed and reported encounters

Part II

Sixty-seven or 85.9 percent of the consultations requested by the family nurse practitioner were for advice and only 11 or 14.1 percent were for transfer of responsibility. All requests for advice and for transfer of responsibility were directed to physicians who were members of the clinic staff. (See Table 10, page 34, and thus considered internal.) The fact that only 14.1 percent of the consultations requested were for transfer of responsibility suggests the family nurse practitioners were confident in their ability to provide primary care to the majority of patients they saw. The fact that no external consultations were requested suggests that the family nurse practitioner believed that the physicians on the clinic staff were capable of managing the problems which they

could not. It may also suggest that the family nurse practitioners were not completely aware of the contributions that could be made by physicians outside the clinic staff.

TABLE 10

PERCENT AND NUMBER OF INTERNAL AND EXTERNAL CONSULTATIONS BY TYPE OF CONSULTATION

Type of Consultation	Internal #	Internal %	External #	External %
Advice	67	85.9	0	0
Transfer of Responsibility	11	14.1	0	0
Total	78	100.0	0	0

The reasons for consultations are seen in Table 11, page 35. Physical findings, symptoms and treatments were the three largest categories of reasons for consultation. All three of these areas fall within the expanded role of the family nurse practitioner. Because family nurse practitioners have been trained to assume more responsibility in these areas, they may require more assistance from the physician when dealing with physical findings, symptoms and treatments. Eighteen percent of consultations for no standing orders may suggest the need for additional standing orders in some categories. The 15.4 percent of consultations per standing orders indicates that there are not many situations which are strictly defined as requiring a consultation. The 1.3 percent of

consultations per patient request may suggest that the family nurse practitioner is well accepted by the patient.

TABLE 11

PERCENT AND NUMBER OF REASONS FOR CONSULTATION IN ALL ENCOUNTERS INVOLVING CONSULTATION

Reasons for Consultation*	#	%
Physical Findings	42	53.8
Symptoms	38	48.7
Treatments	35	44.9
Test Results	17	22.0
No Standing Orders	14	18.0
Per Standing Orders	12	15.4
Patient Request	1	1.3
Other	1	1.3

*More than one reason may be involved in each request for consultation

As seen in Table 12, page 36, the physician's most frequent response to consultation was to give advice 64 or 82.1 percent. In 12 or 15.4 percent of the consultations he assumes responsibility and in 7 or 9 percent he recommends external transfer of responsibility. Although the physician recommended external transfer of responsibility

9 percent of the time, it was not in response to the family nurse practitioner's request. This may suggest that the physician was more knowledgeable about external resources or more realistic about his own limitations. In 33 or 42.3 percent of the responses to consultation, the physician saw the patient and in 45 or 57.7 percent of the responses, he did not.

TABLE 12

NUMBER AND PERCENT OF ALL ENCOUNTERS IN WHICH CONSULTATIONS OCCURRED BY MD RESPONSE AND WHETHER MD SAW PATIENT

MD Response*	MD Saw Patient #	MD Saw Patient %	MD Did Not See Patient #	MD Did Not See Patient %	Total #	Total %
Gives Advice	22	66.7	42	93.3	64	82.1
Assumes Responsibility	10	30.3	2	4.4	12	15.4
Recommends External Transfer	2	6.1	5	11.1	7	9.0
All Types of Response	33	42.3	45	57.7	78	100.0

*These categories are not mutually exclusive in a given consultation--the MD may make more than one of the responses indicated

As seen in Table 13, page 37, of the 67 consultations requested for advice, the physician responded with advice 57 times or 85 percent of the time. Of the 11 consultations requested for internal transfer of responsibility 8 times or 72.7 percent of the time the physician responded accordingly. In 65 or 83.3 percent of the 78

TABLE 13

TYPE OF CONSULTATION REQUESTED BY FNP
BY MD RESPONSE TO CONSULTATION*

Type of Consultation	Advice	Advice & Internal Transfer	Advice & External Transfer	Internal Transfer	External Transfer	Sees Patient Only	Total
Advice	57	2	2	1	4	1	67
Internal Transfer		1		8	1	1	11
Total							78

*The MD could respond in more than one way to a request for consultation

tations in which the FNP requested advice or internal transfer of responsibility the physician responded with the requested response.

Part III

At the time that this study was done most of the systems available for classification of presenting problems in ambulatory settings were based on systems that had been developed for hospital morbidity data[3] and did not provide for non sickness oriented health problems. Although some investigators had modified the ICD to meet their own needs,[4] none of the classification systems reviewed appeared appropriate for use at OCCHS, Inc. For that reason a method of classifying problems including problems most often seen at the clinic was developed. The categories to be used were decided on after talking with the clinic staff and looking at the present method for classifying problems. The categories needed to be specific enough to provide a good idea of the kinds of problems the family nurse practitioners were managing and general enough so that there would be significant numbers in each category.

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[3]Public Health Service, DHEW, International Classification of Diseases, Adopted for Indexing of Hospital Records, Vol. I, Tabular List, Pub. No. 719, rev. ed., (Washington: U.S. Government Printing Office, December 1962).

[4]Arnold Hurtado and Merwyn Greenlick, "A Disease Classification System for Analysis of Medical Care Utilization, With a Note on Symptom Classification," Health Services Research 6(3) (1971), pp. 235-245.

Table 14, page 40, contains the number and percent of the presenting problems of the observed encounters (90) and the family nurse practitioners reported encounters (51) in which consultations occurred which is a total of 141. As can be seen from the table, the only categories that were not utilized were in the chronic cardiac classification. They were CVA, angina, MI and vascular. Although these categories were not utilized the investigator believes they make an important distinction in cardiovascular conditions and should not be discarded if this classification scheme is utilized in the future.

Thirteen or 9.2 percent of presenting problems were written into the episodic infection other category. The only presenting problems that appeared more than twice in this category were urinary infections, which appeared twice and vaginal infection, which appeared five times. The investigator believes that both of these categories should be included if this classification scheme is to be utilized in the future.

Sixteen or 11.3 percent of the presenting problems were written in the episodic other category. The only presenting problems that appeared more than once, were skin rash, which appeared three times and allergic conjunctivitis, which appeared twice. The investigator believes that the category of skin rash should be included if this classification scheme is to be utilized in the future.

TABLE 14

NUMBER AND PERCENT OF PRESENTING PROBLEMS

Presenting Problems		#	%
Prenatal		1	0.7
Postpartum		2	1.4
Family Planning		3	2.1
Well Child		7	5.0
Health Assessment		9	6.4
Mental Health		1	0.7
Episodic			
Injury		2	1.4
Infection:	URI	14	9.9
	Other	13	9.2
Cardiovascular		3	2.1
Respiratory		4	2.8
GI		5	3.5
GU		10	7.1
Other		16	11.3
Chronic			
Cardiovascular:	CVA	0	
	CHF	4	2.8
	Hyper-tension	15	10.6
	Angina	0	
	MI	0	
	Vascular	0	
	Other	5	3.5
Respiratory		3	2.1
GI		2	1.4
GU		1	0.7
Metabolic:	Diabetes	12	8.5
	Other	3	2.1
Arthritis		1	0.7
Cancer		1	0.7
Other		4	2.8
Total		141	100.0

Five or 3.5 percent of the presenting problems were written in the chronic cardiovascular other category. Arteriosclerotic heart disease was the only presenting problem that appeared more than once and should therefore be included in any revision of the classification scheme.

Three or 2.1 percent of the presenting problems were written in the chronic metabolic other category. Of the three, obesity appeared twice and should therefore be included in any revision of the classification scheme.

Four or 2.8 percent of the presenting problems were written in the chronic other category. None of the presenting problems appeared more than once.

With the above mentioned changes, the investigator believes that this classification scheme can be effectively utilized to classify presenting problems of patients, seen by family nurse practitioners in a primary care setting. By identifying the presenting problems of patients that require a family nurse practitioner to consult with a physician, future investigators could identify areas where family nurse practitioners need maximum physician backup. They might also identify areas where family nurse practitioners need more training or areas where additional protocols are needed. This in turn could help improve the delivery of health care by family nurse practitioners in a primary care setting.

CHAPTER IV

CONCLUSION

The significant findings and conclusions drawn from this study will be discussed in this chapter. The findings resulting from observing the consultation activities of the family nurse practitioners and the methodology used to collect this data will be discussed. The limitations of this study with recommendations for future studies will be presented.

Family Nurse Practitioner Consultation Activities

This section will summarize the significant findings of Chapter III. The investigator will emphasize the findings considered most important.

A consultation rate of 23 percent on observed and family nurse practitioner reported encounters demonstrates that the family nurse practitioners in the observed setting were able to provide primary care to patients using established protocols without consulting a physician in 77 percent of the observed and reported encounters. The consultation rate of 23 percent is very close to the consultation rate found in two other studies using similarly prepared practitioners in similar settings. If the

consultations were appropriate, which could not be directly assessed, the family nurse practitioners and physicians are efficiently utilizing their time to provide primary care.

The factor that most affected the consultation rate was whether or not a physician was present in the clinic during the encounters. Of the encounters observed 54 occurred when a physician was present in the clinic for a consultation rate of 40.7 percent and 36 occurred when a physician was not present in the clinic for a consultation rate of 13.9 percent. Although Chapter III suggests some reasons for the difference in the rates, no specific conclusions can be drawn from the data.

The largest percent of consultations occurred in encounters where the age of the patients was in the 0-4 and the 25-44 group. The smallest percent of the consultations occurred in encounters where the age of patients was in the 43 to 64 and 65 over age groups. This may suggest that the family nurse practitioners were less knowledgeable about infant and child care and may have implications for the need for further training. Caution must be exercised in drawing conclusions from the above data as the number of encounters observed from which the data were generated was small, 90. No data on age were collected from the family nurse practitioner reported encounters not requiring consultation.

The most frequent reasons for consultation were physical findings 53.8 percent, symptoms 48.7 percent and treatments 44.9 percent. These are areas for which the family nurse practitioner in the extended role has assumed more responsibility than the traditional nurse. It is therefore reasonable to expect that more consultations would occur for those reasons. In 18 percent of the consultations the reason for consultation was no standing orders. This suggests that the efficiency of the family nurse practitioner physician team might be improved by developing additional protocols. In only one instance did the consultations result from a patient's request which suggests that the family nurse practitioner is well accepted by patients.

Of the 67 consultations in which the nurse requested advice, the physician responded with advice 57 times or 85 percent. Of the 11 consultations in which the nurse requested transfer of responsibility the physician responded with transfer of responsibility 8 times or 72.7 percent. Although the family nurse practitioner did not request external transfer of responsibility the physician responded with this recommendation 9 percent of the time. This suggests that the physician's response is congruent with the family nurse practitioner's request except in the area of external transfer of responsibility. This may indicate that the family nurse practitioners need more training in physician resources outside the clinic.

Methodology

The investigator believes that a useful method was developed to analyze family nurse practitioner physician consultations. The observation record could be used to gather data without any changes in Part I or Part III. However if Part II of the Observation Record is to be used again the investigator would recommend the following changes.

Because urinary infections appeared twice and vaginal infections appeared five times in the episodic infection other category, the investigator believes these two categories should be added. Other problems that appeared more than once and indicate the need for separate categories are skin rash, arteriosclerotic heart disease and obesity.

Limitations

Although the study does describe consultation rates, reasons for consultations, circumstances surrounding consultations and physician response to consultation it does not generate data as to whether the consultation in all situations is appropriate. This limits the conclusions the investigator can make about the efficiency of the family nurse practitioner-physician team in delivering health care in a primary care setting.

Recommendations for Further Study

It is recommended that the consultation activities of family nurse practitioners in this setting be studied again at a later date to see if the consultation rate decreases as the experience and competency of the family nurse practitioner increases. Consultations could also be studied after new protocols are written to see if additional protocols would decrease family nurse practitioner physician consultation rates.

It is also recommended that the consultation rates for specific presenting problems be studied as a means of more clearly identifying what patient problems require a high family nurse practitioner physician consultation rate and which problems have a low consultation rate. This would help identify what kind of physician backup would be necessary for various presenting problems. Consultation rates for patients with multiple problems might also be studied and compared with consultation rates for patients with one problem.

Summary

An observation study was done to analyze the consultation activities of family nurse practitioners in a primary care setting to see if a nurse in an extended role could improve the delivery of health care services by providing primary care to patients without excessive reliance on the physician for consultation.

In the 337 encounters studied 78 required family nurse practitioner physician consultation for a consultation rate of 23 percent. This means that in 77 percent of the family nurse practitioner patient encounters the family nurse practitioner is able to provide primary care without physician consultation.

Therefore the use of the family nurse practitioner in the extended role improves the delivery of health care by allowing more efficient use of the physician nurse team in providing primary care.

APPENDICES

APPENDIX I

PROCEDURE FOR SELECTION OF OBSERVATION TIME PERIODS

Procedure for Selection of Observation Time Periods

The objective of the sampling procedure was to obtain a representative picture of a family nurse practitioner's typical week. Because the family nurse practitioner's week varies according to both the day of the week and the time of day, namely mornings and afternoons, time was sampled rather than encounters. Because two observers would be conducting observations, the sample consisted of twenty observation time periods, a morning and afternoon for each day of the week, Monday through Friday, per observer. An observation schedule was devised in which each observer's assignment to these ten observation time periods within a three week data collection period was randomized. The procedure for devising the observation schedule for each observer was as follows.

1. A number from one to three was drawn to determine the data collection week in which four observation time periods would be assigned, allowing for relatively equal distribution of observation time periods throughout the three week data collection period. The frequency of observation time periods by data collection week for observer-one was four-three-three; for observer-two, three-three-four.

2. Each of the ten observation time periods were assigned a number--one, Monday AM; two, Monday PM; three, Tuesday AM; four, Tuesday PM; to ten, Friday PM.

3. Observer-one drew four numbers from ten for data collection week-one, three numbers from the remaining six for data collection week-two and the last three numbers for data collection week-three. Observer-two drew three numbers from ten for data collection week-one, three numbers from the remaining seven for data collection week-two and the last four numbers for data collection week-three. The observation time periods were assigned within the three week data collection period on the basis of the draw for each observer. This scheme allowed for the random selection of observation time periods and also permitted each observer to conduct observations during each of the ten observation time periods.

During any given observation time period several family nurse practitioners would be in the clinic simultaneously and their assignment to either patients with walk-in status or appointment status would vary. Therefore, in order to provide for approximately equal observations of the three family nurse practitioners per observer and encounters with patients of walkin and appointment status per observer, the assignment of observers to family nurse practitioner for each observation time period was conveniently fashioned. (See Appendix II.) This assignment was scheduled before the investigation began and was adhered to throughout the data collection period. This method of assignment allowed for an approximately equal

balance of observation time periods for each family nurse practitioner by their assignment to either walk-ins or appointments for each observer.[1]

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[1]From C. Freund, "A Description of Family Nurse Practitioners' Activities" (Master's Thesis, School of Nursing, University of North Carolina).

APPENDIX II

APPROACH FOR ASSIGNMENT OF OBSERVER TO FAMILY NURSE PRACTITIONER

Approach for Assignment of Observers to Family Nurse Practitioners

After the randomized observation time period schedule was completed, the assignment of individual family nurse practitioners for each observation time period was undertaken in the following manner.

1. Beginning with the first observation time period, a coin was tossed to determine whether a family nurse practitioner assigned to either patients with walk-in or appointment status would be observed. If two family nurse practitioners were assigned to patients with the same status, a coin was tossed to determine which of these two family nurse practitioners would be observed.

2. Proceeding to the corresponding observation time period (the second observation time period on the same day of the week and time of day), the family nurse practitioner assigned to patients with a status opposite to the status in #1 above would be observed. Thus, if on the first Monday AM observation time period a family nurse practitioner assigned to patients with walk-in status was to be observed, on the second Monday AM observation time period the family nurse practitioner assigned to patients with appointment status would be observed.

3. Assignments for the remaining observation time periods were made as described in #1 or #2 above.

4. After most of the assignments were made utilizing the approach described in #1 and #2 above, it became obvious that the assignment of individual observer to individual family nurse practitioner was somewhat uneven. Thus, several assignments were shifted to achieve the most equitable distribution of:

a. the three family nurse practitioners per observer,

b. walk-in and appointment encounters per observer per family nurse practitioner, and

c. a walk-in and appointment encounter for each pair of corresponding observation time periods.[1]

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[1]From C. Freund, "A Description of Family Nurse Practitioners' Activities" (Master's thesis, School of Nursing, University of North Carolina).

APPENDIX III

OBSERVATION RECORD

PART I

FACE SHEET

PATIENT I.D. NO.: ☐☐ (1 2) ☐☐☐☐☐ (3 4 5 6 7)

AGE: ☐☐ (8 9)

SEX: MALE ☐ 0 FEMALE ☐ 1 ☐ 10

APPT. STATUS: WALK-IN ☐ 0 APPT ☐ 1 ☐ 11

FNP: ☐ 0 ☐ 1 ☐ 2 ☐ 12

INV.: ☐ 0 ☐ 1 FNP ☐ 3 ☐ 13

MD PRESENT: PED. YES ☐ 0 NO ☐ 1 ☐ 14

OB-GYN YES ☐ 0 NO ☐ 1 ☐ 15

INTERNIST YES ☐ 0 NO ☐ 1 ☐ 16

TIME PERIOD: AM ☐ 0 PM ☐ 1 ☐ 17

DAY OF WEEK: MON. ☐ 0 TUES. ☐ 1 WED. ☐ 2 THURS. ☐ 3 FRI. ☐ 4 ☐ 18

PART II

PRESENTING PROBLEM

PRENATAL ☐ 0

POSTPARTUM ☐ 1

FAMILY PLANNING ☐ 2

WELL CHILD ☐ 3

HEALTH ASSESSMENT ☐ 4

MENTAL HEALTH ☐ 5

EPISODIC: INJURY ☐ 6

INFECTION: URI ☐ 7

OTHER ☐ 8 Specify: _____

CARDIOVASCULAR ☐ 9

RESPIRATORY ☐ 10

GI ☐ 11

GU ☐ 12

OTHER ☐ 13 Specify: _____

PRESENTING PROBLEM ☐☐ 19 20

CHRONIC DISEASE:

CARDIOVASCULAR: CVA ☐ 14

CHF ☐ 15

HYPERTENSION ☐ 16

ANGINA ☐ 17

MI ☐ 18

VASCULAR ☐ 19

OTHER ☐ 20 Specify: _____

RESPIRATORY ☐ 21

GI ☐ 22

GU ☐ 23

METABOLIC: DIABETIC ☐ 24

OTHER ☐ 25 Specify: _____

ARTHRITIS ☐ 26

CANCER ☐ 27

OTHER ☐ 28 Specify: _____

PART III

PHYSICIAN CONSULTATION

TIME: BEFORE ☐ 0 DURING ☐ 1 AFTER ☐ 2 ☐ 21

METHOD: IN PERSON ☐ 0 TELEPHONE ☐ 1 WRITTEN ☐ 2 ☐ 22

TYPE: INTERNAL FOR ADVICE ☐ 0

INTERNAL TRANSFER OF RESPONSIBILITY ☐ 1

EXTERNAL FOR ADVICE ☐ 2

EXTERNAL TRANSFER OF RESPONSIBILITY ☐ 3 ☐ 23

REASONS:	YES	NO	
SYMPTOMS	☐ 0	☐ 1	☐ 24
PHYSICAL FINDINGS	☐ 0	☐ 1	☐ 25
TEST RESULTS	☐ 0	☐ 1	☐ 26
TREATMENTS	☐ 0	☐ 1	☐ 27
PATIENT REQUEST	☐ 0	☐ 1	☐ 28
PER STANDING ORDER	☐ 0	☐ 1	☐ 29
NO STANDING ORDER	☐ 0	☐ 1	☐ 30
OTHER _____	☐ 0	☐ 1	☐ 31

PHYSICIAN RESPONSE:	SEES PT.	YES ☐ 0	NO ☐ 1	☐ 32
	GIVES ADVICE	YES ☐ 0	NO ☐ 1	☐ 33
	ASSUMES RESPONSIBILITY	YES ☐ 0	NO ☐ 1	☐ 34
	RECOMMENDS EXTERNAL TRANSFER OF RESPONSIBILITY	YES ☐ 0	NO ☐ 1	☐ 35
	OTHER _____	YES ☐ 0	NO ☐ 1	☐ 36

PART IV

ACTIVITIES

ACTIVITIES	DESCRIPTION	TIME IN UNITS OF SECONDS	TOTAL TIME
HISTORY			37 38 39 40
PHYSICAL EXAM			41 42 43 44
COUNSELING & TEACHING			45 46 47 48
TREATMENTS			49 50 51 52
LAB SPECS. & PROCS.			53 54 55 56
PHARM. PREP.			57 58 59 60
PHYSICIAN CONSULTATION			61 62 63 64
FNP CONSUL-TATION			65 66 67 68
OTHER CONSUL-TATION			69 70 71 72
MEDICAL RECORD REVIEW			73 74 75 76
CHARTING			1 2 3 4

1
80

ACTIVITIES	DESCRIPTION	TIME IN UNITS OF SECONDS	TOTAL TIME
STAFF CONFERENCE			5 6 7 8
COMMUNICATION WITH OUTSIDE CHANNELS			9 10 11 12
CLERICAL			13 14 15 16
OTHER			17 18 19 20

PART IV CONT.

TOTAL TIME OF ENCOUNTER ☐☐☐☐ 21 22 23 24

ACTIVITY DESCRIPTION: LAB SPECS. & PROCS.

	YES	NO	
ORDERS	☐ 0	☐ 1	☐ 25
OBTAINS	☐ 0	☐ 1	☐ 26
ANALYZES	☐ 0	☐ 1	☐ 27

PHARM. PREP.

	YES	NO	
CONTINUE	☐ 0	☐ 1	☐ 28
MODIFY	☐ 0	☐ 1	☐ 29
NEW	☐ 0	☐ 1	☐ 30

ENCOUNTER COMPLETE:

YES	NO	
☐ 0	☐ 1	☐ 31

IF NO, SPECIFY: _____

☐2 80

APPENDIX IV

INSTRUCTIONS AND DEFINITIONS FOR THE OBSERVATION RECORD

General Instructions

Part I, II and III of the Observation Record is completed each time a physician consultation occurs during the three weeks that the study is being done. Physician consultation is defined as a communication with a physician for an opinion, or advice, regarding the patient's symptoms, physical findings, treatment, etc. Questions are to be answered at the time of, or immediately after the physician consultation. The questions can be coded at any convenient time. Unanswered questions are to be coded "9".

Part I Face Sheet

Part I contains identifying information and can be completed immediately preceding, during or immediately after the encounter, whenever time permits.

The patient's identification number and age can be obtained from the patient's chart and should be recorded directly into the code boxes. If a patient's age is less than one year, the age is recorded as "00".

The remaining information if self explanatory and should be answered as appropriate.

Part II Presenting Problem

Presenting problem is defined as the primary reason for which the patient is being seen at the clinic. If a patient presents with multiple problems, the primary problem is considered the presenting problem.

The presenting problem is determined by either observing the encounter or asking the family nurse practitioner. If the presenting problem within either the episodic or chronic disease category is not listed, the category "other" is checked and the presenting problem written in the respective blank.

Definitions of the main categories of presenting problems are:

Prenatal: any visit by a pregnant woman for purposes related to the pregnancy.

Postpartum: any visit by a woman after delivery for purposes related to the delivery.

Family Planning: any visit for the purpose of obtaining information and methods on controlling family size.

Well Child: any visit by an infant or child to the age of sixteen for the purpose of immunization or routine check-up in the absence of any symptoms.

Health Assessment: any visit for the purpose of an initial work-up on any infant, child or adult.

Mental Health: any visit made for the purpose of emotional or psychological problems without obvious mental disease.

Episodic: the first visit of all acute and chronic conditions and subsequent acute conditions with the potential for being completely resolved.

Chronic Disease: any condition seen at least once before in the clinic that does not have the potential for being completely resolved in the future.

Part III Physician Consultation

Part III is completed when a physician consultation is conducted while observing an encounter. Physician consultation is defined as a communication with a physician for an opinion or advice regarding the patient's symptoms, physical findings, treatment, etc.

Questions are answered appropriately and can be coded at any convenient time. If any questions is unanswered, it should be coded "9".

Definitions of the questions are:

Time: refers to when the consultation occurs in relation to the family nurse practitioner-patient encounter.

Before: the consultation occurs before the family nurse practitioner-patient encounter.

During: the consultation occurs during the family nurse practitioner-patient encounter.

After: the consultation occurs after the family nurse practitioner-patient encounter.

Method: refers to the means the family nurse practitioner uses to communicate with the physician.

In person: the communication between the family nurse practitioner and physician is face to face.

Telephone: the communication between the family nurse practitioner and physician is by telephone.

Written: the communication between the family nurse practitioner and physician is in writing.

Type: refers to the direction of (internal vs. external) and the level of (advice vs. transfer of responsibility) the consultation request.

Internal: the communication is directed to a physician who is a member of the Orange-Chatham Comprehensive Health Services, Inc. primary health care team.

External: the communication is directed to any physician who is not a member of the Orange-Chatham Comprehensive Health Services, Inc. primary health care team.

Advice: the family nurse practitioner asks the physician for his opinion, information of confirmation of her opinion.

Transfer of responsibility: the family nurse practitioner asks the physician to assume management of the patient.

Reasons: refers to the problem area or areas for which the consultation was initiated.

Symptoms: subjective evidence of disease obtained by history.

Physical findings: objective evidence of disease obtained by physical exam.

Test results: objective evidence of disease obtained by laboratory methods or any other objective method except physical exam.

Treatment: measures prescribed for the purpose of maintaining health or combating disease such as medicines, diet or activity.

Patient request: the patient asks to see the physician.

Per standing order: the problems presented by the patient corresponds with a problem described in the standing orders that calls for a physician consultation.

Standing orders: guideline for family nurse practitioners' action as defined by Orange-Chatham Comprehensive Health Services, Inc. physicians.

No standing orders: the problem presented by a patient is one that is not described in the standing orders.

Physician response: refers to the action taken by the physician in response to a family nurse practitioner consultation.

Gives advice: the physician gives his opinion, information or confirms the opinion of the family nurse practitioner.

Sees patient: the physician talks with or examines the patient in person.

Assumes responsibility: the physician takes over the management of the patient for at least the next clinic visit.

Recommends external transfer of responsibility: the physician recommends that the management of the patient be taken over by a physician who is not a member of the Orange-Chatham Comprehensive Health Services, Inc. primary health team for at lease one encounter with the patient.

Part IV & V[1]

The information obtained from Part IV & V of the Observation Record is not used in this study. Part IV & V is completed by the investigator if a Physician Consultation occurs during an observed encounter.

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[1]A description of how Part IV & V of the Observation Record is used, can be found in C. Freund "A Description of Family Nurse Practitioner's Activities" (Master's Thesis, School of Nursing).

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